

JUL 01 2019

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
ROANOKE DIVISION

JULIA C. DUDLEY, CLERK
BY: *A. Single*
DEPUTY CLERK

UNITED STATES OF AMERICA,

v.

YIHENG PERCIVAL ZHANG

Defendant.

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) Case No. 7:17-cr-00073

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) By: Michael F. Urbanski
) Chief United States District Judge
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MEMORANDUM OPINION

On February 21, 2019, this court found defendant Yiheng Percival Zhang guilty of conspiracy to defraud the United States under 18 U.S.C. § 371 (Count One), aiding and abetting the submission of false statements under 18 U.S.C. §§ 2 and 1001(a)(2) (Counts Three, Four, and Five), and obstruction of justice under 18 U.S.C. § 1519 (Count Twelve). Zhang, with the consent of the government, waived his right to a jury trial, and this case was tried before the court.

Zhang has moved for judgment of acquittal as to Counts One, Three, Four, and Five, arguing insufficiency of the evidence and claiming no reasonable fact-finder could convict on these counts. ECF No. 185. The government disagrees and urges the court to affirm the guilty verdict on these counts. Zhang did not move for acquittal as to Count Twelve, charging obstruction of justice.

After careful review of the trial record and arguments of counsel, the court concludes that the government submitted sufficient evidence for a reasonable fact-finder to find Zhang guilty

of conspiracy and of aiding and abetting the submission of false statements as charged in Counts One, Three, Four, and Five. Accordingly, the motion for judgment of acquittal, ECF No. 185, is **DENIED**.

I.

Though the court assumes the parties are familiar with the findings of fact outlined in the Findings of Fact and Conclusions of Law, ECF No. 184, the facts pertinent to Counts One, Three, Four, and Five are summarized below.

Zhang founded Cell-Free Bioinnovations, Inc. (“CFB”) and served as its President and Chief Scientific Officer at all times relevant to these charges. ECF No. 184, at 5. A small research company, CFB relied exclusively on grant funding for its programs. *Id.* at 8. Three CFB proposals to the National Science Foundation (“NSF”) are at the heart of this Rule 29 motion: the “Inositol 1” grant proposal, “Sugar Phosphate” grant, and “Inositol 2” grant proposal.¹

These three proposals fell into two categories of grants: Small Business Innovation Research (“SBIR”) and Small Business Technology Transfer Research (“STTR”). ECF No. 184, at 9. Both categories aim to promote innovation in the private sector by providing early-stage capital to entrepreneurs. *Id.* The proposal process is highly competitive; generally, only 10-20% of proposals receive funding. *Id.* at 10. The process begins with a public solicitation, which lays out the requirements grant recipients must meet and references specific policies, terms, and conditions with which applicants must comply. *Id.* at 10, 45. Before submission,

¹ The “Inositol 1” Grant Proposal corresponds with NSF Proposal Number 11548815 and responded to Program Solicitation NSF 15-546. The “Sugar Phosphate” Grant corresponds with NSF Proposal Number 1549018 and responded to Program Solicitation NSF 15-545. The “Inositol 2” Grant Proposal corresponds with NSF Proposal Number 1621085 and responded to Program Solicitation NSF 15-605.

an Authorized Organizational Representative (“AOR”) must electronically sign various certifications. One such certification specifies that “[b]y electronically signing and submitting this proposal, the Authorized Organizational Representative or Individual Applicant is . . . agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.” ECF No. 126, at 2–3.

Like all NSF solicitations, the solicitations to which CFB responded with the Inositol 1, Sugar Phosphate, and Inositol 2 proposals state that “[a]ny proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 15-1), which is effective for proposals submitted, or due, on or after December 26, 2014.” ECF No. 184, at 46; Ex. 2A, at 1 (relating to Inositol 1);² Ex. 1A.1 (relating to Sugar Phosphate);³ Ex. 3A (relating to Inositol 2).⁴ The PAPPG defines the responsibilities of the NSF and the grantee as follows:

- (1) NSF agrees to provide up to a specified amount of financial support for the project to be performed under the conditions and requirements of the grant. NSF will monitor grant progress and assure compliance with applicable standards.
- (2) The grantee agrees to: perform the project as proposed; the prudent management of the funds provided; and carry out the supported activities in accordance with the provisions of the grant.

² The Inositol 1 program solicitation was admitted into evidence as Exhibit 2A without objection at trial. ECF No. 169, at 6.

³ The Sugar Phosphate program solicitation was admitted into evidence as Exhibit 1A.1 without objection at trial. ECF No. 169, at 6. Ex. The Findings of Fact and Conclusions of Law referred to this document as both Exhibit 1A and Exhibit 1A.1. See ECF No. 184.

⁴ The Inositol 2 program solicitation was admitted into evidence as Exhibit 3A without objection at trial. ECF No. 169, at 6.

Ex. 1A.3, at 15.⁵ The PAPPG also states that “[t]he same work cannot be funded twice.” *Id.* at 32. The PAPPG’s Proposal Preparation & Submission Guidelines require disclosure of “all current and pending support for ongoing projects and proposals, including this project, and any subsequent funding in the case of continuing grants. All current project support from whatever source (e.g. Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed.” *Id.* at 54 (emphasis in original). The PAPPG’s Award & Administrative Guidelines state that “[t]he acceptance of an award from NSF creates a legal duty on the part of the grantee organization to use the funds or property made available in accordance with the terms and conditions of the award.” Ex. P-1.iii, at 119. These policies are consistent with the testimony of Dr. Prakash Balan, a Program Director at NSF. Balan emphasized that grant funds are not awarded for research that is already completed and that, with the exception of a 7 percent profit margin, grant awards must be spent on the subject of the grant. ECF No. 184, at 46–47.

The government introduced extensive email evidence in which Zhang repeatedly discussed his scheme to obtain federal grant funds via the Inositol 1, Sugar Phosphate, and Inositol 2 grant proposals, for research that had already been completed in China.⁶ Zhang’s emails indicated he that planned to impermissibly use significant portions of any awarded grants to fund other projects.⁷

⁵ The PAPPG was admitted into evidence as Exhibit 1A.3 without objection at trial. ECF No. 169, at 6.

⁶ The specific statements proving that Zhang did not intend to comply with the terms and conditions of a grant award will be discussed in relation to each proposal below.

⁷ The specific statements proving that Zhang intended to use any awarded grant funds elsewhere will be discussed in relation to each proposal below.

Counts Three, Four, and Five of the superseding indictment charged Zhang with aiding and abetting false statements made in a matter within the jurisdiction of the executive branch of the Government of the United States, within the Inositol 1, Sugar Phosphate, and Inositol 2 grant proposals respectively. The superseding indictment alleged that these proposals “falsely represented the funds sought would be used to fund new research on certain matters, when, in fact, the funds were to be used for other purposes.” ECF No. 63, at 9. Plainly, the superseding indictment provided Zhang with notice of the false statements charged such that he could prepare his defense. In particular, the superseding indictment identified (1) the three NSF proposals, (2) the false certifications, and (3) the reason the certifications were false. Nevertheless, Zhang filed a motion for a bill of particulars to which the court directed the government to respond. At a pretrial conference held on August 7, 2018, the government indicated that it would respond to the motion for bill of particulars that day that will provide defendant with some information. Crim. Mins., ECF No. 125. In its response, the government stated: “While the government’s position is that the superseding indictment fairly apprises the defendant of the charges so that he can prepare a defense and avoid surprise at trial, the government is also providing the following information out of an abundance of caution.” ECF No. 126, at 1. At a subsequent pretrial hearing held on August 24, 2018, the court inquired about the bill of particulars issue. Zhang’s counsel stated that the response received was substantive, helpful, and alleviated concerns and had no issue to raise with the court. Crim. Mins., ECF No. 132.

The government’s response to the motion for bill of particulars as to Counts Three, Four, and Five all follow a similar pattern. The response identified the same false

representation, rationale, and omissions for each proposal. The false representation and rationale were:

By electronically signing and submitting this proposal, the Authorized Organizational Representative or Individual Applicant is: (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.' This statement is false in that the defendant and CFB had no intention of complying with NSF award terms and conditions.

ECF No. 126, at 2–3. As to all three counts, the response also listed omissions consisting of the “Failure to disclose the relationship between Yiheng Percival Zhang and the Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Tianjin, China; (2) Failure to disclose that much, if not all, of the work set forth in the attached Proposal had already been done and/or funded in China; and (3) Failure to disclose the intended use of the grant funds.” Id. at 2–4.

The government alleged, and the court found, that Zhang worked to obtain competitive NSF awards for projects that he admitted had already been completed in China, in violation of grant requirements that the grants be for new work to be done in the United States. ECF No. 184, at 2. The court found that the evidence showed, beyond a reasonable doubt, that Zhang is guilty of aiding and abetting the submission of false certifications in the Inositol 1, Sugar Phosphate, and Inositol 2 proposals. ECF No. 184, at 52, 59, 61. In Count One, the court also found Zhang guilty of conspiracy to defraud the United States by making these false representations. ECF No. 184, at 40.

II.

The court now turns to the merits of the motion for acquittal. Rule 29 of the Federal Rules of Criminal Procedure states that “the court may set aside the verdict and enter an acquittal” if the defendant so moves within 14 days of the verdict. Fed. R. Crim. P. 29(c).

“There is only one ground for a motion for judgment of acquittal. This is that the evidence is insufficient to sustain a conviction of one or more of the offenses charged in the indictment or information.” 2A Charles A. Wright, Federal Practice and Procedure: Criminal § 466 (4th ed. 2016) (internal citations omitted). “A judgment of acquittal based on the insufficiency of evidence is a ruling by the court that as a matter of law the government’s evidence is insufficient ‘to establish factual guilt’ on the charges in the indictment.” United States v. Alvarez, 351 F.3d 126, 129 (4th Cir. 2003) (quoting Smalis v. Pennsylvania, 476 U.S. 140, 144 (1986)). “The test for deciding a motion for a judgment of acquittal is whether there is substantial evidence (direct or circumstantial) which, taken in the light most favorable to the prosecution, would warrant a [] finding that the defendant was guilty beyond a reasonable doubt.” United States v. MacCloskey, 682 F.2d 468, 473 (4th Cir. 1982). “[S]ubstantial evidence is evidence that a reasonable finder of fact could accept as adequate and sufficient to support a conclusion of a defendant’s guilt beyond a reasonable doubt.” United States v. Burgos, 94 F.3d 849, 862 (4th Cir. 1996). Accordingly, a court must deny a defendant’s motion if the evidence presented at trial, viewed in the light most favorable to the government, is sufficient for a rational juror to find each element of the offense beyond a reasonable doubt. United States v. United Med. & Surgical Supply Corp., 989 F.2d 1390, 1402 (4th Cir. 1993) (citing Jackson v. Virginia, 443 U.S. 307, 319 (1979)); see also United States v. Friske, 640 F.3d

1288, 1290–91 (11th Cir. 2011) (“In reviewing a sufficiency of the evidence challenge, we consider the evidence in the light most favorable to the [g]overnment, drawing all reasonable inferences and credibility choices in the [g]overnment’s favor.”).

III.

Counts Three, Four, and Five all involve charges associated with aiding and abetting the submission of false representations. To find Zhang guilty of these charges, the court must be convinced beyond a reasonable doubt that Zhang committed the specific crime as charged.

The pertinent statute, 18 U.S.C. § 1001, states:

[W]hoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully . . . makes any materially false, fictitious, or fraudulent statement or representation . . . shall be guilty of an offense against the United States.

18 U.S.C. § 1001(a)(2). “The essential elements of a § 1001(a)(2) offense are, as follows: 1. [a] material statement or representation; 2. [w]hich is false, fictitious, or fraudulent, 3. [m]ade in a matter within the jurisdiction of a department or agency of the United States; and 4. [d]one knowingly and willfully.” United States v. Stover, 499 F. App’x 267, 272–73 (4th Cir. 2012) (citing United States v. Camper, 384 F.3d 1073, 1075 (9th Cir. 2004)). “[T]he terms ‘knowingly and willfully’ modify only the making of ‘false, fictitious or fraudulent statements.’” United States v. Yermian, 468 U.S. 63, 69 (1984). “[I]n the context of false statement prosecutions, when the indictment has specifically alleged the facts that show the defendant’s statement is false, the government must prove the statement is untruthful for the reason alleged in the indictment.” United States v. Mallory, No. 1:17-CR-154, 2018 WL 4997641, at *8 (E.D. Va.

Oct. 15, 2018) (citing United States v. Hoover, 467 F.3d 496 (5th Cir. 2006); United States v. Crocker, 568 F.2d 1049, 1060 (3d Cir. 1977)).

For Counts Three, Four, and Five, criminal liability is premised on Zhang's conduct in aiding and abetting others to make false statements. 18 U.S.C. § 2 states:

- (a) Whoever commits an offense against the United States or aids, abets, counsels, commands, induces, or procures its commission, is punishable as a principal.
- (b) Whoever willfully causes an act to be done which if directly performed by him or another would be an offense against the United States, is punishable as a principal.

"To prove the crime of aiding and abetting the government must show that the defendant knowingly associated himself with and participated in the criminal venture. To prove the element of association, the government must show that the defendant shared in the principal's criminal intent." United States v. Winstead, 708 F.2d 925, 927 (4th Cir. 1983). "[P]articipation at every stage of an illegal venture is not required, only participation at some stage accompanied by knowledge of the result and intent to bring about that result." United States v. Burgos, 94 F.3d 849, 873 (4th Cir. 1996) (en banc) (internal citations omitted).

Count One charges Zhang with conspiracy to defraud the United States in violation of 18 U.S.C. § 371. The elements of a conspiracy under § 371 are: "(1) the existence of an agreement, (2) an overt act by a conspirator in furtherance of the objectives, and (3) an intent on the part of the conspirators to agree as well as to defraud the United States." United States v. Gosselin Worldwide Moving, N.V., 411 F.3d 502, 516 (4th Cir. 2005).

Zhang makes several arguments attempting to prove that there is insufficient evidence to support the verdict. First, Zhang argues that the verdict did not actually find Zhang guilty of

the charges described in the bill of particulars, making his conviction inappropriate. Second, Zhang argues that the government's evidence and the verdict are improperly based on a theory of concealment rather than misrepresentation. Finally, Zhang argues that certain pieces of evidence were given undue and conflicting weight. None of these arguments is convincing; each will be addressed in turn.

A. The Verdict is Properly Based on the Charges in the Superseding Indictment and Response to Bill of Particulars.

The superseding indictment charged that each of the proposals "falsely represented the funds sought would be used to fund new research on certain matters, when, in fact, the funds were to be used for other purposes, and did not disclose that the work represented to be performed with grant funds had already been done." ECF No. 63, at 9. Because the proposals involved "literally hundreds of representations," Zhang requested a bill of particulars that would "[i]dentify all materially false, fictitious, and fraudulent statements and representations, including how these statements are materially false and fraudulent." ECF No. 111, at 10.

A bill of particulars is intended to "fairly apprise the defendant of the charges against him so that he may adequately prepare a defense and avoid surprise at trial." United States v. Fletcher, 74 F.3d 49, 53 (4th Cir. 1996). It "is not to be used to provide detailed disclosure of the government's evidence in advance of trial." United States v. Automated Med. Labs., Inc., 770 F.2d 399, 405 (4th Cir. 1985). As Zhang acknowledged in his motion for a bill of particulars, the document "does not amend or alter the indictment, but instead 'merely amplifies the indictment by providing missing or additional information so that the defendant can effectively prepare for trial.'" ECF No. 111, at 5 (quoting Fletcher, 74 F.3d at 53).

Here, the government's response to the bill of particulars specifically identified the following certification in each of the three proposals as the false representation:

By electronically signing and submitting this proposal, the Authorized Organizational Representative or Individual Applicant is: (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.

ECF No. 126, at 2–3. The government noted that this statement was false because “the defendant and CFB had no intention of complying with NSF award terms and conditions.”

Id.

Zhang argues that, in its response to the bill of particulars, the government dropped the indictment's allegation that Zhang “falsely represented the funds sought would be used to fund new research when, in fact, funds were to be used for other purposes.” ECF No. 186, at 3–4. This is not the case. Under Fletcher, a bill of particulars does not negate the allegations in an indictment—it merely focuses them onto this specific misrepresentation. 74 F.3d at 53.

The government proved that the certification for each proposal was false because Zhang and his confederates at CFB never intended to abide by the grant's terms and conditions. These terms and conditions—expressly referenced in the superseding indictment—required that grant proposals be for new research and that awarded funds be used for the project indicated. It cannot be credibly argued that the response to the bill of particulars fundamentally altered the crimes charged in the superseding indictment. Rather, the response focused Zhang on the specific false certification at issue in Counts Three, Four, and Five and stated that “CFB had no intention of complying with NSF award terms and conditions.” ECF No. 126, at 2–3.

While the response was not fulsome as to why Zhang and CFB did not intend to comply with NSF award terms and conditions, the superseding indictment was very clear: “the submissions falsely represented the funds sought would be used to fund new research on certain matters, when, in fact, the funds were to be used for other purposes, and did not disclose that the work requested to be performed with grant funds had already been done.” ECF No. 64, at 9, 11.

Nor can Zhang claim unfair surprise at trial. A bill of particulars is intended to “give the defendant the minimum amount of information necessary to permit the defendant to conduct his own investigation.” United States v. Smith, 776 F.2d 1104, 1111 (3d Cir. 1985) (emphasis in original). Here, Zhang’s defense attacked the government’s assertion that the NSF Inositol and Sugar Phosphate proposals were not new work, calling expert biochemist Robert Edwards to testify that proposals found on Zhang’s computer did not duplicate the NSF proposals. ECF No. 184, at 51. Taken together, the superseding indictment and response to bill of particulars fairly apprised Zhang of the government’s charges. As in Fletcher, Zhang “provides no evidence that he was prevented from bringing a full defense or that he encountered unfair surprise at trial.” Fletcher, 74 F.3d at 53.

B. The Government Proved that the Certification was False Because Zhang Did Not Intend to Comply with the Terms and Conditions.

Zhang contends that the verdict is unsupported because the government failed to introduce the relevant terms and conditions into evidence, the government did not present evidence that the certifications were false, and the court did not actually find the specific representation referenced in the bill of particulars false. These contentions are without merit.

1. Counts Three and Five: Inositol 1 and 2

On June 16, 2015, Principal Investigator (“PI”) Chun You electronically signed a certification in the Inositol 1 proposal “agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.” Ex. 2B, at 2; ECF No. 184, at 47–48.⁸ An identical certification was submitted by Zhiguang Zhu on December 7, 2015 in the Inositol 2 proposal. Ex. 3B, at 2. According to the program solicitations, the award conditions include, among other documents, the project’s budget and the proposal itself. Ex. 2A, at 14; Ex. 3A, at 12. The solicitation also specifies that proposals must be submitted “in accordance with the NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF-15-1).” Ex. 2A, at 1; Ex. 3A, at 1. Since awardees must comply with their own proposal, and the proposal must follow the terms set forth in the PAPPG, certifying that the applicant will “comply with NSF award terms and conditions” necessarily includes compliance with the terms in the PAPPG.⁹

The PAPPG (1) specifies that “[t]he same work cannot be funded twice;” and (2) requires grantees to “perform the project as proposed.” Ex. 1A.3, at 15, 32. The program solicitation required that the proposal’s budget “reflect the needs of the proposed R&D project.” Ex. 2A,

⁸ Zhang argues that no legal obligation arises from the certification unless and until an award is made. ECF No. 186, at 15. Even if true, Zhang repeatedly demonstrated that he would not abide by the award terms and conditions. Agreeing to accept the NSF award terms and conditions—while simultaneously plotting to violate those very terms by proposing already-completed research and misallocating award monies to other projects—is irrefutably a false representation, whether or not the award has been made. See *Stover*, 499 F. App’x at 272–73 (listing the four elements of a false representation: (1) a material misstatement or misrepresentation; (2) which is false, fictitious, or fraudulent; (3) made in a matter within the jurisdiction of a department or agency of the United States; and (4) done knowingly or willfully).

⁹ In addition to common sense and logic dictating that the terms and conditions governing the proposal are part of the terms and conditions governing any award resulting from that proposal, the program solicitation’s Award Conditions section contemplates the Award & Administrative Guidelines section of the PAPPG, where it directs applicants for additional information on terms and conditions. Ex. 1A.1, at 14.

at 8 (emphasis in original); Ex. 3A, at 8. The government introduced extensive email evidence that Zhang did not intend to comply with these terms and conditions for both the Inositol 1 and Inositol 2 proposals.

Zhang stated on multiple occasions that this work had been funded before: he told unidentified Chinese individuals that “[w]hat we plan to do in this [Inositol 1] proposal has been done already;” he emailed his colleagues at CFB that “nearly all experiments in SBIR 1 (inositol) have been finished;” and he specified that “the inositol project was funded by Chinese funding agency, starting in the late of 2014.” Ex. 2F, at 1; Ex. 1F, at 1; Ex. 1G, at 1. Zhang’s emails indicate he had no intention of performing the project as proposed. He advertised his plans to his colleagues, writing “if [inositol] is funded, most of SBIR 1 will be used for CFB to support other projects.” Ex. 1F, at 1. Zhang prepared the budget for the Inositol 1 proposal, with no intention of complying with the terms requiring that project funds be used as indicated. See Ex. 2C.

In April 2017, Zhang sent a letter to Virginia Tech stating:

Most research professors are using federal grants to support unsupported research activities and using finished research activities as future research plans in submitted proposals. According to federal funding regulation, it is regarded as fraudulence. Should the school be responsible for encouraging such systematic fraudulence? Or the school admitted not to provide enough training to faculty members about proper professional ethics.

Ex. 9I.2_r, at 2. This email demonstrates that Zhang knew his conduct in violating these specific policies was wrong. Zhang’s admissions support the Findings of Fact and Conclusions of Law by establishing beyond a reasonable doubt that he knowingly and willfully aided and abetted the submission of two false proposals. ECF No. 184, at 50, 61.

Zhang argues that the relevant terms and conditions were not introduced into evidence. The court disagrees. The NSF award terms and conditions are not housed in a single place—the program solicitation itself makes it clear that the award terms and conditions are found throughout a number of documents.¹⁰ Under “Award Conditions,” the program solicitations state:

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)[]; or Research Terms and Conditions[] and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. . . .

More comprehensive information on NSF Award Conditions . . . is contained in the NSF Award & Administration Guide (AAG) Chapter II . . .

Ex. 2A, at 14; Ex. 3A, at 12. Zhang attempts to narrow this list to the two documents referenced above in (4): the NSF Research Terms & Conditions and the Grant General Conditions. ECF No. 186, at 15, n.8. By the text of the program solicitations themselves, this is not the case. While Zhang is correct that neither the General Grant Conditions nor the Research Terms and Conditions were introduced into evidence, neither document is necessary to support a conviction in this case. As noted above, since compliance with the proposal is an

¹⁰ The SBIR/STTR Grant General Conditions similarly indicate that the NSF grant terms and conditions are found in a variety of documents. “The grantee is responsible for ensuring that the Principal Investigator(s) (PIs) or Project Director(s) (PDs) receive a copy of the grant conditions, including: the notice of award, the budget, these general terms and conditions, any special terms and conditions and any subsequent changes in the grant conditions.” Ex. 1D.2, at 3.

enumerated condition in the solicitation, and proposals must be submitted in accordance with the PAPPG, the PAPPG forms part of the NSF's award terms and conditions. By introducing the PAPPG, the program solicitations, and other documents, the government introduced the relevant terms and conditions.

Zhang further contends that the government did not introduce evidence supporting the conclusion that the certifications were false. Again, this argument is unconvincing. As noted above, the government demonstrated that Zhang and CFB sought funding for research that he admitted had already been completed and did not intend to use as the project proposed. Both actions violate the terms set forth in the PAPPG. The evidence is sufficient to prove that the certification was false.

Finally, Zhang argues that the court did not actually find the certifications false. Not only did the certifications "form the basis for the false representation . . . charges," their falsity is precisely why the court found the Inositol 1 and 2 proposals to be false. ECF No. 184, at 15, 52, 61.

2. Count Four: Sugar Phosphate

Count Four is similar to Count Three in many ways. Just as with the Inositol program solicitations, the Sugar Phosphate program solicitation required compliance with the PAPPG. The PAPPG stipulated that "[t]he same work cannot be funded twice;" and required grantees to "perform the project as proposed." Ex. 1A.3, at 15, 32. Zhiguang Zhu served as AOR for this proposal and electronically signed a certification "agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this

application.” Ex. 1B, at 2.¹¹ The bill of particulars identified this certification as the misrepresentation and the verdict relied upon the certification as “the basis for the false representation” charge. ECF No. 126, at 3; ECF No. 184, at 15.

In its award letter, the NSF notified CFB and Zhang that the Sugar Phosphate grant was subject to the original solicitation terms. Ex. 1D.1, at 1. As PAPPG compliance was an explicit term of the solicitation, the award letter made it crystal clear that the PAPPG is among the terms and conditions contemplated by the certification. Ex. 1A.1, at 6; Ex. 1D.1.

Just as with Inositol 1 and 2, the award terms and conditions contemplated by the Sugar Phosphate certification are not found in a single document; instead, the NSF award terms and conditions are found across an array of documents, including the PAPPG and the program solicitation. As noted above, the “Award Conditions” section of the program solicitation contemplates terms and conditions drawn from a non-exhaustive list, including the award notice, the budget, the proposal, the applicable award conditions, and other announcements or issuances incorporated by reference. Ex. 1A.1, at 14. Zhang’s attempt to narrow these terms and conditions to two documents not introduced into evidence therefore falls short.

Zhang was intimately involved with preparing the Sugar Phosphate proposal—he was initially listed as co-PI and helped prepare the proposal’s budget. Ex. 1B; Ex. 1A.1. As with the Inositol proposals, Zhang’s emails demonstrate that he and CFB had no intention of complying with the terms requiring new research and that the project be performed as proposed. Zhang notified his colleagues that the proposal was for research that had already

¹¹ See footnote 7.

been completed, writing: “[a]bout sugar phosphate project, the experiments have been conducted by one of my collaborators and my satellite lab in China.” Ex. 1F, at 1.

Zhang further described how any awarded funds would be used. In May 2015, he wrote to Daniel Wichelecki, a CFB employee and the project’s PI:

What we expect here is to get this free money and use a half of money to do what you want to do – make sweeteners. Another half will be used to pay VT graduate students to finish this project. If funded, your role in this project is like the manager mostly. Your top priority remains on sweeteners.

Ex. 1E, at 1. Zhang reiterated this plan in June 2015, writing “If this project is funded by STTR, most of money will be used to fund the other projects in CFB, too.” Ex. 1F, at 1. Once the funds were awarded under the Sugar Phosphate proposal, Zhang confirmed with his colleagues that the money would actually be used for sweeteners, writing “[n]ow we have this money to support tagatose project.” Ex. 1N.

As referenced in the verdict, Zhang’s emails further demonstrate that his conduct was knowing and willful. He told colleagues in January 2016, regarding a different NSF proposal, that “I will put a lot of finished work into the proposal as planned work.” Ex. 10H.1, at 1; ECF No. 184, at 57. His note to Virginia Tech in April 2017, set forth above, demonstrates that he knew this conduct was wrong.

The evidence supports the verdict that the government proved beyond a reasonable doubt that “Zhang knowingly and willfully aided and abetted his colleague [Zhiguang Zhu] in submitting a grant proposal to NSF that was materially false.” ECF No. 184, at 57.¹² Just as

¹² The Findings of Fact and Conclusions of Law referred to Zhang’s colleague Chun You, who submitted the Inositol 1 proposal. ECF No. 184, at 57. This was an error, Zhiguang Zhu served as AOR for the Sugar Phosphate grant. ECF No. 184, at 15.

with Inositol 1 and 2, the Sugar Phosphate proposal was found to be false because of this false certification.

C. The Verdict is Properly Based on Misrepresentation, not Concealment

Zhang alleges that the verdict is improperly based on a theory of concealment—properly charged under 28 U.S.C. § 1001(a)(1)—rather than on a false representation theory, as charged under 28 U.S.C. § 1001(a)(2). ECF No. 186, at 10. Zhang argues that “a court must overturn a conviction for false representations under § 1002(a)(2) if it is based on evidence of concealment and not on an actual false representation.” ECF No. 186, at 12 (citing United States v. Diogo, 320 F.2d 898, 909 (2d Cir. 1963)).

As discussed in Part A above, the verdict in this case rested on the false representation submitted at the end of each proposal. ECF No. 184, at 15, 52, 57, 61. This certification specified that the signatory “agree[ed] to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application.” Ex. 1B, at 2; Ex. 2B, at 2; Ex. 3B, at 2. Zhang intended to violate these terms and conditions by proposing research that had already been completed and improperly applying portions of awarded funds to other projects. The certification, therefore, was an affirmative statement that falsely represented Zhang’s intentions.

The thrust of Zhang’s argument comes from the response to the bill of particulars, in which the government categorized these violations of the terms and conditions as omissions. ECF No. 126, at 2–3. While concealment and misrepresentation fall under different statutes, certain actions do not fit neatly into one category or the other. See, e.g., United States v. Westover, 107 F. App’x 840, 846 (10th Cir. 2004) (failing to report income to government

agency was properly charged as a misrepresentation under § 1001(a)(2)). Falsely certifying that the information is “correct [and] without consequential omissions” is a misrepresentation properly charged under § 1001(a)(2), despite the fact that the underlying conduct could be characterized as concealment. See United States v. Celis, 128 F. App’x 819, 819 (2d Cir. 2005). Similarly, Zhang’s false certification that CFB “agree[ed] to comply with award terms and conditions” is a misrepresentation, though the specific underlying conduct—violating those terms by planning to improperly use grant funds and proposing completed research—could also be characterized as an omission.

The evidence relied upon in the verdict proved what was charged in both the indictment and the response to the bill of particulars: Zhang aided and abetted the submission of a false representation in several grant proposals. ECF No. 184 at 48–52, 55–61.

D. The Verdict Gives Proper Weight to Zhang’s Emails and Edwards’s Testimony

Zhang further argues that the court gave undue weight to Zhang’s emails, which the defense characterizes as “extrajudicial” and “uncorroborated.” ECF No. 186, at 19.¹³ The corroboration rule is a “settled principle” holding “‘that a conviction must rest upon firmer ground than the uncorroborated admission or confession of the accused’ made after commission of a crime.” United States v. Abu Ali, 528 F.3d 210, 234 (4th Cir. 2008) (citing Wong Sun v. United States, 371 U.S. 471, 488-89 (1963)). The rule’s purpose is to protect defendants from the “zeal of the agencies of prosecution” which, paired with “weakness of the accused under the strain of suspicion” could “warp the facts of the confession.” Opper

¹³ The government calls the court’s attention to the fact that Zhang did not argue that the emails were extrajudicial and therefore inadmissible during trial. ECF No. 202, at 16.

v. United States, 348 U.S. 84, 89–90 (1954). The cases Zhang cites illustrate this proposition: the corroboration rule applies in the context of post-offense statements made to law enforcement officers. See United States v. Ramirez, 635 F.3d 249, 256–57 (6th Cir. 2011) (emphasizing that the purpose of the corroboration rule is to “avoid errors” based on “untrue confessions” “extracted from a person under the pressure of a police investigation,” and therefore the rule applies “only to post-offense, extrajudicial statements”); Gov’t of Virgin Islands v. Hoheb, 777 F.2d 138, 141–42 (3d Cir. 1985) (collecting cases) (“[T]he Supreme Court held that admissions made before a crime occurred need not be corroborated, and more recent cases have extended this holding to apply to statements made during the course of a conspiracy.”); United States v. Marshall, 863 F.2d 1285, 1290 (6th Cir. 1988) (“This circuit has recognized that admissions made “before, or during the commission of, a crime . . . need not be corroborated.”); United States v. Turner, 917 F.2d 1305, *2 (6th Cir. 1990) (applying the corroboration rule to statements made during a post-offense search of the defendant’s home); United States v. Todd, 657 F.2d 212, 216–17 (8th Cir. 1981) (finding that uncorroborated statements to law enforcement officers several years after the offense were insufficient to support conviction). Because Zhang’s emails were written during and not after the offense, there is no concern that law enforcement pressure elicited a false confession. The corroboration rule does not apply.

In fact, if Zhang had made a post-offense confession to law enforcement officers subject to the corroboration rule, his emails would likely have served as sufficient corroborating evidence. One of the cases on which Zhang relies, Todd, found that “proof of one overt act, such as a phone call may be sufficient” to satisfy the corroboration rule. 657 F.3d at 216; See,

e.g., Skinner v. Loudoun Cty. Dep't of Mgmt. & Fin. Servs., 602 F. App'x 907, 909 (4th Cir. 2015) (finding that email evidence corroborated hearsay statements); United States v. Spellissy, No. 8:05-CR-475, 2006 WL 1980274, at *2 n.1 (M.D. Fla. July 12, 2006) (finding email evidence sufficient for conspiracy charges but granting a motion for new trial based on substantial evidence contradicting additional emails related to wire fraud).

Zhang further argues that the verdict is inconsistent, as it credited expert biochemist Robert Edwards's testimony that the two proposals found on Zhang's hard drive were different than two of the proposals submitted to the NSF, yet convicted Zhang of submitting duplicative research. ECF No. 186, at 18. However, the court, sitting as the trier of fact, found both Edwards's testimony and Zhang's emailed statements credible. ECF No. 184, at 51. All that Edwards's testimony showed was that the two specific proposals on Zhang's computer were not identical to those submitted to the NSF. This extremely limited sample did not, and could not, prove what Zhang claims, that "the work Dr. Zhang completed in China was *different* from the work CFB proposed to NSF." ECF No. 186, at 18. Edwards's testimony does not vitiate Zhang's repeated statements that the research he included in NSF proposals had already been completed in China. ECF No. 184, at 51. To reiterate the Findings of Fact and Conclusions of Law:

[t]he court does not believe that it is necessary for the government to prove with precision the specific items of duplicative, substantially equivalent, or overlapping research which had been performed in China because Zhang's own words in his emails admitted this fact over and over again. Zhang's statements in his emails establish the innate falsity of the . . . proposal beyond a reasonable doubt.

ECF No. 184, at 51–52, 58.

IV.

For the reasons set forth above, the court will **DENY** defendant's motion for judgment of acquittal, ECF No. 185. The defendant's convictions on Counts One, Three, Four, and Five are **AFFIRMED**.

An appropriate Order will be entered.

Entered: 07-01-2019

/s/ Michael F. Urbanski

Michael F. Urbanski
Chief United States District Judge